Honey Industry.

231 263 438 [139] The only other product of economic consequence is the celebrated Du'an honey. Honey from Jerdan has an even greater local renown but is not produced in such quantities. At places like Tarim it is not considered possible to grow honey owing to the depradations of the Blue-cheeked Bee eater (*Merops persicus persicus*), one of the most common, as well as most beautiful, birds in the Hadhramaut. We did not observe this bird at all in the Wadi Du'an, where it is shot on sight.

231 263 The hives are tunnel-like structures fitted into the walls of the houses, and consist of circular sections about a foot in diameter. In the outside wall is a small hole through which the bees enter and leave the hives. Du'an enjoys two honey crops in a year; that of June, July and August being regarded as the best, for in it the bees collect the honey from the blossoms of the *'elb* trees. The honey obtained during the second crop, from November to March, is gathered from a small bush called *Qarnala*, and while it is highly esteemed it is considered very heating and may not be eaten [843] by pregnant women. If there is much rain during April and May, the bees make a black honey called *helb*, and they are said to grow much stronger, for they consume this honey themselves. The swarming of the bees was thus described by a bee-keeper: A second queen bee, whom they call *āb* or father, sometimes leaves the hive and goes a short distance away followed by some of the others. The bee-owner takes a mat and rolls it up in the shape of a hive, closing one end, and sprinkling inside a perfume of the perfumes used by the ladies. Approaching the swarm, he gently takes the queen in his fingers out of it and puts her into a small cage made for the purpose. The cage is then put inside the rolled mat. An assistant beats a tin or copper tray and the bees leave the place where they have swarmed and come to the queen. The swarm is now carried to a hive, the queen bee and her cage put into the hive, and in go the bees after her.

The bees collect the crop in 12 to 20 days, and when the owner sees the hive is full he fits on more sections until they have finished. Thirty to 40 pounds of honey are collected from a single hive at each crop. The honey is gathered by smoking the bees out from behind. When they have left, the exit hole is stopped up and the honey is taken, one section being left for the bees. In times of drought, honey is put into the hives for the bees to eat. The honey 251 is packed in comb and as liquid. In the former case two sizes of round tins are used, containing 4 lb. and 7 lb. respectively. An inside cover is soldered to the tins in Mukalla. Liquid honey is packed in cases of two kerosene tins. The value of the honey 435 in Mukalla is one rupee a pound. The total production is 90,000 to 100,000 pounds.

000 In view of the great renown which Du'an honey enjoys in South Arabia and the East Indies, and in view of the fact that it is much appreciated by Europeans, I had hoped that there might be

possibilities of a market being found for it as a luxury honey in England, and through the help of the Colonial Office a tin was sent to the Imperial Institute for examination. The result, however, is disappointing, and it seems that the honey would not be likely to be popular in England.

The following is the report which the Imperial Institute was good enough to prepare :—

REPORT ON HONEY FROM ARABIA.

The sample of honey which is the subject of this report was forwarded to the Imperial Institute by the Colonial Office and is referred to in a letter dated 28th February from that department. It had been received from a Political Officer in the Aden Protectorate, who had obtained it during a tour in the Hadhramaut. It was desired to have the honey analysed and to learn its market possibilities.

Description.—The sample weighed about 2½ lb. and consisted of honey in the comb. The honey, after separation from the comb by straining, was of a rather dark golden brown colour, and possessed a very sweet taste and a peculiar, aromatic odour. The odour and taste were both different from those of the honey commonly marketed in the United Kingdom.

Results of Examination.—The strained honey was found to be dextro-rotatory, whereas ordinary honey is laevo-rotatory. It was accordingly examined in comparison with the figures recorded for dextro-rotatory honey, and the following results were obtained :—

	Present sample. Per cent.	*Recorded Figures.* Per cent.
Moisture	13·6	13·6 to 17·8
Ash	0·06	0·3 to 1·3
Ready-formed reducing sugars, expressed as invert sugar	47·9	64·8 to 71·7
Sugars reducing only after inversion, expressed as sucrose	27·3[1]	0·6 to 5·3
	°Ventzke.	*°Ventzke.*
Immediate direct polarization at 20° C. ...	+ 29·6	+ 6·7 to + 24·9
Constant direct polarization at 20° C. ...	+ 17·9	+ 3·6 to + 17·8
Direct polarization at 87° C....	+ 24·7	+ 28·5 to + 35·8
Polarization at 20° C. after inversion ...	− 10·0	− 2·5 to + 15·0
Polarization at 87° C. after inversion ...	+ 18·4	+ 20·9 to + 35·0

The honey consumed in the United Kingdom and other Western countries is of the laevo-rotatory type, the sugars of which consist principally of dextrose and laevolose, with only from 1 to 4 per cent. of sucrose. The foregoing results show that the present sample is a dextro-rotatory honey with a high " apparent sucrose " content, and suggest that it is a

[1] This figure would include other polysaccharides in addition to sucrose.

1:Ingrams G-5 (1934-35)1936 MM2 Hadhramaut MM2

000 product of the " honeydew " type,[1] which would account for its unusual taste and odour.

Commercial Value.—The honey was submitted to two firms of merchants in London who reported respectively as follows :—

(1) " We thank you for your letter and sample of honey, which we have examined. Although the body is quite good, we think you will agree that it leaves much to be desired with regard to flavour.

" At the moment England is so well served with honey of agreeable flavour that it seems doubtful if this honey could be imported to any material benefit. We can buy Jamaica honey, which is good both in colour and flavour, at 26s. per cwt. landed London, so you will appreciate that the value of the present honey would have to be decidedly below this figure. We think you will be well advised to inform your friend that there is little likelihood of an opening on the London market."

(2) " This honey appears to be of a good flavour, but at the present moment there is such a large stock of honey available of all kinds that it would be difficult to find a market for a fresh quality from a new origin."

The latter firm mentioned that Colonial honey was currently selling on the London market at prices ranging from 25s. to 40s. per cwt., according to quality. It will be observed that there is a difference of opinion with regard to the flavour of the honey, but it may be pointed out that the taste is undoubtedly such as would not appeal to the ordinary consumer in this country.

439 263 *Remarks.*—From the trade reports quoted above it will be seen that the possibility of disposing of this honey in the United Kingdom is very doubtful, in view of the large supplies of ordinary honey of good quality available on the market. Furthermore, it is probable that such dextro-rotatory honey would be regarded with suspicion, whilst its unattractive flavour and odour would be further obstacles to its sale.

Livestock.

556 231 The wealth of the Beduins lies principally in their livestock, consisting of camels, donkeys, cattle, sheep, goats and poultry. Camels and donkeys are reared for transport purposes. The selling of animals is a regular feature of the fairs which are held all over the country at the many shrines of saints. The Qu'aiti Government estimates the number of camels in the country at 20,000.

231 232 Sheep and goats are raised for milk and meat. Cattle, though not plentiful, are not uncommon. An outbreak of rinderpest had killed 60 head of cattle at Hajarein at the time of our visit, and this was considered a very heavy loss. Heald states a decoction of

[1] This is not ordinary honey originating in floral nectar, but is produced by the bee from secretions of leaves and sometimes from secretions deposited by insects.